

AUREOMYCIN IN THE LOCAL TREATMENT OF TRICHOMONAS VAGINITIS*

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Many preparations have been used for the local treatment of trichomonas vaginitis and the immediate response to many of them has been satisfactory. Unfortunately, recurrence of infection has occurred in a high proportion of the cases and the problem of satisfactory treatment remains unsolved. Local application of the pentavalent arsenical "acetarsol" is accepted by most clinicians as the treatment of choice. This type of therapy is, however, contraindicated if the patient has in the past shown sensitivity to an arsenical preparation. Long-continued use of acetarsol has occasionally resulted in arsenical dermatitis, a serious complication which inevitably recurs if an arsenical is used again. Under these circumstances an alternative form of local treatment has to be found.

PREVIOUS STUDIES

A report by McVay and others (1949) suggested that the local application of aureomycin hydrochloride in powder form was curative in cases of trichomonas vaginitis. They prepared a powder for vaginal insufflation by adding aureomycin to powdered talc, but in the first instance they treated six infected patients with talc alone, insufflating 2 g. daily for 2 days and again on the fourth day. The trichomonads disappeared temporarily, but 3 days after completing the insufflations five patients out of the six showed the parasite in the secretions again, and the condition recurred in the sixth case 5 days later. An unspecified number of patients were then treated with aureomycin given in the form of capsules by mouth, 2 g. daily for 7 days, without beneficial effect. After these preliminary investigations they treated a series of 54 patients suffering from trichomonas vaginitis with vaginal insufflations of powders, each of which consisted of aureomycin 500 mg. and talc 2 g., on the 1st, 2nd, 4th, and 6th days. They continued treatment by inserting gelatine capsules, each containing 250 mg. aureomycin, into the vagina on alternate nights for 2 weeks. Each patient was instructed to wear a

vulvar pad after treatment; douching and sexual intercourse were forbidden. Twelve of these patients, who were pregnant, were given additional treatment in the form of insufflations of the powder on the 3rd and 8th days.

These authors reported the following results:

(i) of 31 non-pregnant patients with symptomatic infection, all were relieved of symptoms and the signs of infection disappeared, but three relapsed or were re-infected, and one of these suffered recurrence of symptoms.

(ii) Of eleven non-pregnant patients originally without symptoms, all responded to treatment without relapse or re-infection during the period of observation.

(iii) Of twelve pregnant patients with symptoms, all were relieved of symptoms with disappearance of signs of infection, but three relapsed or were re-infected, two suffering recurrence of symptoms while one did not.

Those patients who relapsed or were re-infected were stated to have been successfully re-treated with two or three similar courses. All the patients remained under observation for 2 to 3 months after treatment. Twelve patients were followed for a full 6 months and in two of these cases trichomonads reappeared. No severe toxic effects after treatment were noted. Nine patients experienced mild local discomfort, in the form of pruritus, a sensation of burning, or actual pain in the vagina, occurring in most cases after the first or second insufflation.

PRESENT INVESTIGATIONS

In view of the satisfactory nature of this report, a small series of patients has been treated along similar lines at the Whitechapel Clinic. In all cases the diagnosis was confirmed by microscopic examination of direct moist preparations.

Ten patients received insufflations, each of aureomycin 500 mg. combined with talc 2 g., on the 1st, 2nd, 3rd, 4th, 6th, and 8th days of treatment. Each patient was instructed to insert a gelatine capsule containing aureomycin 250 mg. into the vagina at night on each of the 2nd, 4th, 6th, 8th, 10th, 12th, and 14th days. Vaginal smears were examined for trichomonads on each day before insufflation and a

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catheter specimen of urine was centrifuged and examined for trichomonads on the 4th, 6th, and 8th days to exclude urinary trichomoniasis.

In two cases, trichomonads were found in the urine, and these patients were given additional treatment in the form of daily urethro-vesical irrigations of 1 in 10,000 oxycyanide of mercury for 7 days. In all ten cases the vaginitis resolved and the parasites disappeared from the vaginal secretions. In the majority, recovery seemed to have been effected by the third or fourth day of treatment.

One patient defaulted immediately. Nine remained under observation, and of these eight suffered recurrence of vaginitis with reappearance of trichomonads in the vaginal secretions after the first or second menstrual period following treatment. In only one case did the condition remain satisfactory after 3 months of observation; it so happened that the patient concerned was one of the two who received urethro-vesical irrigations.

It was decided to change the method of treatment in the next twenty cases. The aureomycin was given locally as before, but urethro-vesical irrigations with 1 in 8,000 oxycyanide of mercury were given in addition in every case on the 3rd, 4th, 6th, 7th, 8th, 9th, and 10th days. Again the immediate response to treatment was satisfactory in all cases. Nine patients defaulted immediately after treatment and the outcome is not known. Eleven remained under observation, and of these nine showed evidence of recurrence, with trichomonads reappearing in the vaginal secretions after the first or second menstrual periods. Two of these patients had had evidence of urinary as well as vaginal trichomoniasis before treatment. The other two patients remained free from evidence of infestation after 3 months of observation.

FURTHER STUDIES

Since the above was written, Greenblatt and Barfield (1951) have reported that they treated 53 patients with local aureomycin for trichomonas vaginitis. They used aureomycin in various forms—vaginal capsules, vaginal suppositories, insufflations—and in various doses. They selected as their treatment of choice insufflations of powder containing aureomycin 250 to 500 mg., talc 1.0 to 2.0 g., and lactose 1.0 to 2.0 g.; this was applied daily, or every other day, for five consecutive treatments and then repeated as prophylaxis against relapse once weekly for 5 weeks.

Their results for the whole series were as follows:

(i) Trichomonads were absent from the vaginal secretions of 47 (98 per cent.) out of 48 patients examined in the first week of treatment.

(ii) Immediate relief from symptoms occurred in 37 (77.1 per cent.) of the 48 patients.

(iii) After 1 month follow-up, there was no evidence of recurrence in 29 (78.3 per cent.) of 37 cases in which observation was possible.

An unspecified number of patients in this group were followed for three to twelve months and during this time there were nine recurrences of infection, which the authors thought were probably due to re-infection.

DISCUSSION

The immediate results of treatment in the cases under review were as satisfactory as those described by McVay and others, but the ultimate results in those who remained under observation were far from satisfactory. It is only fair to point out, however, that owing to an error in abstracting the paper of these workers, the gelatin capsules were given concurrently with the insufflations in this series instead of after the insufflations had been completed, thus shortening the total duration of treatment.

Several workers in the past have suggested that re-infection from the patient's own urinary tract may be an important factor determining relapse after the treatment of trichomonas vaginitis. Allen and Baum (1943) demonstrated trichomonads in catheter specimens of urine in forty (22.6 per cent.) out of 176 patients with vaginal trichomoniasis.

In the present series, eight (26.7 per cent.) out of thirty patients had urinary trichomoniasis, but there was no conclusive evidence that treatment of the urinary tract as well as of the vagina prevents recurrence of the vaginitis.

The place of local application of powdered aureomycin in the treatment of trichomonas vaginitis remains to be determined. Our own results leave us with the impression that in most cases aureomycin, like its predecessors, is no more than suppressive.

REFERENCES

- Allen, E., and Baum, H. C. (1943). *Amer. J. Obstet. Gynec.*, **45**, 246.
Greenblatt, R. B., and Barfield, W. E. (1951). *Ibid.*, **62**, 423.
McVay, L. V., Laird, R. L., Flanagan, J. B., and Sprunt, D. H. (1949). *Proc. Soc. exp. Biol., N.Y.*, **72**, 674.